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To Develop
Your Skills**

CREDO SYSTEMZ

AWS COURSE CURRICULUM

Our Best AWS course program upskills and supports the aspirants to clear the AWS Certification Exams through real hands-on training with the help of our professional cloud expert trainers.



Who We Are

Credo Systemz boasted as the Best IT Training institute in Chennai, aim in educating the workforce to the IT industry. Along with a team of highly experienced and qualified trainers, we offer state of the art training with excellent infrastructure to keep you above par for the emerging IT skill trends.

With individual attention to our Customers, unique mentorship from trainers with hands-on project training, career & placement guidance, we have 15000+ happy customers who have distinguished us from our competitors, with their satisfied reviews.

Why Choose US

Be it an individual or a corporate collaboration, our dedicated team will serve and assist you for your needs to enhance the effectiveness of training with utmost commitment to your professional development. Also, with comprehensive course duration & Flexible schedule & training pattern, allowing candidates to choose between week day \ week end sessions, or online learning sessions or for our corporate friends to conduct the training in their office premises, we are committed to deliver as per the need of our customer.



Real Time Projects

Live project based on most of the selected use cases, involving the various services of Amazon Web Services.



Lifetime Support & Access

Lifetime access to our LMS and Technical Forum for 24x7 online support team who will resolve all your technical queries.



Hands-on Assignments

Every sessions will be followed by practical assignments which aggregate to a minimum of 60 hours.



Assured Placement

We have dedicated Placement Team that is constantly engaging with the industry to find the right opportunity for you.



Expert Faculty

Our AWS curriculum has been specifically designed and delivered by our expert faculty who has great industry exposure.



Certification

Successful completion of the final project will get you certified as a AWS Solution Architect Professional by Credo Systemz.



First of all, I have been very impressed with Credo Systemz's Course Syllabus which is covered all the important Amazon Web Services. In addition, all the services explained in a simple and practical way. Mentor having great knowledge of AWS. Likewise, he helped me to clear AWS solution architect certification. It made my career growth.

Manish, Cloud Architect



AWS Program Curriculum

01 Cloud computing Introduction



Learning Objective

In this module, you will learn about the different services provided by AWS. You will be provided with an overview of the important resources required to architect an application.



Topics

- History of Cloud Computing
- Concept of Client Server Computing
- Distributed Computing and its Challenges
- What is Cloud Computing?
- Why Cloud Computing?
- Advantages of Cloud Computing



Hands-on Practicals

- History of Cloud Computing
- Concept of Client Server Computing

02 Cloud Computing Deployment Models



Topics

- Introduction of Private Cloud
- Understanding Public Cloud?
- Overview of Hybrid Cloud?

03 Cloud Delivery/ Service Models



Topics

- What is Software as a Service (SaaS)?
- Platform as a Service (PaaS)?
- Infrastructure as a Service (IaaS)?



04 Basics of Linux

Topics

- Basic Linux Commands
- Basic Linux Administration

05 Introduction to AWS Services

Topics

- Amazon Elastic Compute Cloud (EC2)
- Elastic Block Storage (EBS)
- Elastic File System (EFS)
- Amazon Simple Storage Service (S3)
- Amazon Glacier
- Import/Export (Snowball)
- Virtual Private Cloud (VPC)
- Elastic Network Interface (ENI)
- Direct Connect
- Amazon Relational Database Service (RDS)
- Amazon DynamoDB
- Elastic Load Balancing (ELB)
- Route-53
- Simple Notification Services (SNS)
- Server less computing (Lambda)
- Import/Export (Snowball)
- Code Commit
- Cloud Trail
- Elastic Beanstalk
- Cloud Front
- Route-53
- Auto Scaling
- Identity and Access Management (IAM)
- Simple Email Services (SES)
- Simple Queue Services (SQS)
- Simple Notification Services (SNS)
- Elastic Beanstalk
- Server less computing (Lambda)
- Cloud Trail
- Cloud Watch
- Cloud Front
- Cloud Formation
- Elastic Container Registry - Quick Intro
- Elastic Container Service - Quick Intro

06 Introduction to AWS

Topics

- AWS Global Infrastructure
- Understanding of Regions & Availability Zones
- Overview & Benefits of Edge Locations
- Creating Free Tier Account in AWS
- Introduction of AWS Management Console / CLI / SDK





07 Elastic Compute Cloud (EC2)



Learning Objective:

- Deep knowledge on EC2
- Security, Key Pairs, Tags
- Understanding on Amazon Machine Image (AMI)
- Importance of Elastic IP
- Storage options in EC2



Topics

- Building an Elastic Cloud Computing Windows instance & Linux Instance
- Bootstrapping with user-data
- Security Set up
- Security with Key Pairs
- Working with Security Group
- Different IPs assigned to an Elastic Cloud Computing instance
- Assigning Elastic IPs
- Login/Access to EC2 instance
- Creating your own custom AMI, Registering & Granting access to AMI
- Placement groups
- EC2 instance protection
- Instance Roles
- Elastic Network Interfaces (ENIs)
- Resources and Tags
- Accessing Meta-Data & use cases.



Hands-on Practicals

- Launch of Linux EC2 instance
- Apache installation
- Securing instance
- Launching webserver
- Launching Windows EC2 instance
- Image creation
- Instance launch from image
- Assign Elastic IP to EC2

08 Elastic Block Storage (EBS)



Learning Objective:

- Understanding of EBS
- Different Types in EBS
- EBS – Snapshots



Topics

- What is Elastic Block Store (EBS)?
- EBS Volume Types
- What is EBS Encryption?
- EBS Performance
- Instance Store volumes
- Instance Stores Available on Instance Types
- Instance Store Usage
- Scenarios
- Adding Instance Store Volumes to an AMI
- Optimize the Disk Performance
- Create and delete volumes
- Attach and detach volumes
- Mount and Unmount the attached volume
- Increase the volume size
- Create snapshots
- How to Create Volumes & AMIs from Snapshots?
- Cross-Region snapshot copy & use cases.



Hands-on Practicals

- Creating new EBS block
- Attaching the new block to Linux instance
- Formatting the block
- Using the block for storage
- Handling IOPS details
- Detaching and attaching the block to new instance
- EBS Demo in Windows
- Mount / Unmount the volume
- Switching the block to new zone
- Creating EBS Using snapshots
- Handling the new EBS block for Windows instance

09 Elastic File System (EFS)



Learning Objective:

- Understanding of EFS
- Mounting & Unmounting Details
- Security in EFS



Topics

- What is Elastic File System (EFS)?
- Working with EFS resources
- Mounting EFS File Systems
- Managing EFS
- Monitoring file systems
- Data Protection for EFS



Hands-on Practicals

- Creating a file system
- Deleting a file system
- Creating & managing mount targets
- Creating Security groups
- Creating policies
- Understanding of API

10 Amazon Simple Storage Service(S3)



Learning Objective:

- Understanding of Storage classes in S3
- Benefits of S3
- Understanding of components in S3
- Security / Policy in Buckets & Objects



Topics

- How to Create and delete buckets?
- How to Add objects to buckets?
- Getting the objects
- Deleting the objects
- What is Notifications?
- S3 storage and it's usage
- How to Work with Permissions
- of S3, Access Control, BucketPolicy?
- Types of S3 Data encryption
- S3 Objects Enable Versioning and Logging
- Overview of S3 Lifecycle rules
- Accessing the Simple Storage Services with Tools
- How to Host a Static Website?
- Cross-Origin - Resource Sharing
- Cross-region - replication
- AWS CloudTrail - Audit Logging



Hands-on Practicals

- Creation of S3 buckets
- Loading objects and folders in buckets
- Securing objects
- Using Access policies
- Dealing with access control lists
- Using buckets and objects features
- Creating the bucket as webserver
- Hosting a website in S3
- Access S3 from EC2 Instance
- Cross Region Replication
- S3 command line interface
- Accessing S3 using Python
- Generating Policy using Policy Generator

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Amazon Glacier



Learning Objective:

- Understanding of Glacier
- Benefits of Glacier



Topics

- How to Create Vaults?
- Working with Archives
- Access the Glacier vault
- using tools
- Backups using Glacier
- Understanding Job Operations
- What is Data Retrieval Policy Operations?



Hands-on Practicals

- Creation of Glacier vaults
- Working with FastGlacier
- Details on archive id, checksum, location and S3 lifecycle management

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Virtual Private Cloud (VPC)



Learning Objective:

- Understanding of VPC
- Components in VPC
- Architecting the business requirements into AWS Services
- Depth Knowledge of CIDR and understanding of Ipv4



Topics

- Setting up the different types of networks in AWS
- Understanding of CIDR
- Working with ipv4 Ip address
- How to Create custom VPC?
- What is NACLs & Security Groups?
- Create Internet Gateway(IGW)
- Connect to instances in the gateway
- What is Subnets, Route Tables & Association?
- NAT Instances & NAT-Gateways
- DHCP Options Sets & DNS
- VPC Peering
- Overview of VPN and its components



Hands-on Practicals

- Exclusive demo on VPC scenario 1 and Scenario 2
- Creation and configuring the IP Address for VPC
- Creation of subnet
- Configuring route table
- Access S3 from Private Subnet
- Creation of internet gateways
- Security group creation
- Launch of NAT instances
- Launch of NAT Gateways
- Usage of VPC Wizard

13 Elastic Network Interface (ENI)



Learning Objective:

- Understanding of ENI
- Up the secondary server by using secondary ENI



Topics

- Understanding of Network Interface
- Use case of ENI
- Enabling Management Traffic
- Attach ENI to EC2 Instances



Hands-on Practicals

- Launch EC2 Instances
- Create ENI
- Attach ENI to EC2 Instance
- Create EIP and attach to ENI
- Detach and attach to secondary Instance

14 Amazon Relational Database Service (RDS)



Learning Objective:

- Relational Database Service in AWS
- Types of DB engines in RDS
- Launching MySQL DB



Topics

- What is DB Instances?
- Select the DB-Engine
- Configure the Database Server
- Creating the Database
- How to Set up automatic backups, snapshots & restores?
- Authorizing access to the DB with RDS Security Groups
- DB Instance Replication
- Security: Using IAM to Manage Access to Amazon RDS Resources
- What is RDS Limits?
- How to Manage MySQL Database server?
- DB Instance Life Cycle: How to Rename a DB Instance
- How to Delete or Reboot a DB Instance?
- Overview of Storage Types
- Upgrade a DB Instance
- Option Groups & DB Parameter Groups
- How to work with Reserved DB Instances?
- Understanding Monitoring
- What is Database Log Files?



Hands-on Practicals

- Choosing the DB engine
- Selecting the DB version
- Configuring the deployment details
- Using credentials and default DB details
- Configuring VPC and Subnets
- Enabling logs
- Enabling security via security groups and IAM policies
- Usage on upgrades and maintenance window
- Snapshot creation
- Launch of RDS instance in Linux

15 Amazon DynamoDB



Learning Objective:

- Understanding of NO-SQL DB
- Benefits of DynamoDB
- Working on DynamoDB



Topics

- Creating the Database
- How to Set up automatic backups, snapshots & restores?
- Working with Tables & Data
- Working with Items & Attributes
- Working with Queries
- Working with Scans
- Improving Data Access with Secondary Indexes
- DynamoDB Backups



Hands-on Practicals

- Creating a table
- Insert/Update the data in the console
- Connect DynamoDB from the application
- Enabling logs
- Enabling security via security groups and IAM policies

16 Elastic Load Balancing (ELB)



Learning Objective:

- Elastic Load Balancer and types of ELB
- Components & Policies in ELB



Topics

- What is ELB?
- How ELB Works?
- Types of ELB
- How to Create load balancer
- What is Internal& External Load balancers?
- Load balancing protocols
- What is Listener Configurations?
- What is SSL Negotiation
- Configurations?
- How to Attach& Detach Subnets?
- To create Security groups for the load balancer?
- What is Cross-Zone Load Balancing?
- How to Configure health check for the load balancer?
- Sticky Sessions
- How to Add multiple instances to the load balancer?
- Overview of Custom Domain Names?
- What is DNS Fail over?
- Monitoring and Logging
- What is Connection Draining?
- ELB traffic logging



Hands-on Practicals

- Launching EC2 instances and configure Classic Load Balancer
- Working with Application Load Balancer
- Working with Route53 & ELB

17 Route 53



Learning Objective:

- Host the custom domain using Route53



Topics

- Configure Amazon Route 53 as Your DNS Service
- Register a Domain Name and Configure Amazon Route 53 as the DNS Service
- DNS Service Migration for an Existing Domain to Amazon Route 53
- Create a Sub domain that
- Uses Amazon Route 53 without Migrating the Parent Domain with Public Hosted Zones
- To Work with Private Hosted Zones
- Work with Resource Record Sets
- Overview of Health Checks and DNS Failover
- Health Checks - Creation, Updating, and Deletion
- Transfer a Domain from a Different AWS Account or Registrar
- To Use IAM to Control Access to Amazon Route 53 Resources?



Hands-on Practicals

- Launch of EC2instance
- Creation of Apache Web server Enabling Static IP
- Adding hosted zones
- Fetching name server details
- Linking the name server details with our DNS provider
- Creation ofRecord set
- Using the domain name to see the web pages instead of IP Address



18 Autoscaling



Learning Objective:

- Setup and configure Auto-scaling



Topics

- Introduction to auto scaling
- Auto scaling components
- Advantages of auto scaling
- Launch configuration Prerequisites.
- How to Create launch configuration?
- Creation of Auto Scaling Groups (ASG)?
- How to Attach & Detach EC2 Instances in ASG?
- Configure auto scaling policies based on the Load on EC2 instances?
- Auto scaling with Elastic Load balancer (ELB)?
- Removing the Instances Temporarily
- Suspend and Resume Process
- Shut Down - Auto Scaling Process
- Monitoring - Auto Scaling Instances
- Health Checks
- Getting Notifications When ASG Changes



Hands-on Practicals

- Creation of EC2webservers application, network and classical
- Creation of Load balancer
- Configuring healthy and unhealthy threshold
- Picking the load balancer
- Registering theEC2 instances
- Validation of load balancing
- Configuring Auto scaling
- Creation of Launch Configuration
- Configuring Min,Max and Desired count on instances
- Validation auto scaling

19 Identity and Access Management (IAM)



Learning Objective:

- Managing users, groups
- Permissions to allow / deny
- Custom policies to access AWS resources



Topics

- Create user accounts
- How to Set up multi factor Authentication (MFA)?
- IAM Roles
- IAM Groups
- Delegation of User Permissions
- Create of custom policies for delegation
- How to Use Identity Providers?
- Accessing Cross-Account
- Account settings



Hands-on Practicals

- Creating sub users
- Providing UI and CLI access
- Assigning permissions
- Creating policies in JSON
- Usage of Groups
- Roles revisited
- Password Management
- Overview on MFA



20 Simple Email Services (SES)



Learning Objective

- Understanding of SES
- Use cases of SES



Topics

- How to Set up email domain?
- Limits of Simple Email Services
- Test Email setup



Hands-on Practicals

- Adding and validating Emails in AWS
- Triggering Emails manually using RAW email feature
- Triggering emails via Python scripts

21 Simple Queue Services (SQS)



Learning Objective

- Understanding of SQS
- Types of SQS



Topics

- Create a queue
- How to Send messages to the queue?
- Sending Simple Notification Services to Simple Queue Services
- Retrieving messages from Simple Queue Services



Hands-on Practicals

- Creation of Standard queues
- Configuration of queues
- Handling message pooling
- Creation of FIFO queues
- Accessing the queue via Python scripts
- Pushing and Pulling the messages from queue using Python scripts



22 Simple Notification Services (SNS)



Learning Objective

- Subscription and send mail to the subscriber
- Create a topic and add SNS



Topics

- Create a topic
- Subscribe to topic via Email
- How to set notification for EC2 instance changes?



Hands-on Practicals

- Creation of SNS Topic
- Usage of subscription
- Linking the subscription to a topic
- Visualizing the notification using topic

23 AWS Elastic Beanstalk



Learning Objective

- Understanding of Elastic Beanstalk
- Deploying an application



Topics

- Create Web-App using Elastic Beanstalk
- Build a sample application using Beanstalk
- Modify the properties of deployment
- Deploy v2.0 into Elastic Beanstalk



Hands-on Practicals

- Creation of Beanstalk Application
- Creation of a new environment under the application
- Launch of a webserver using Beanstalk
- Configuring the environment
- Enabling notification for the environment
- Usage on version control on beanstalk



24 Server less computing (Lambda)



Learning Objective

- Understanding the functions in Lambda
- Languages to write a code in Lambda



Topics

- Overview of Lambda
- How Lambda works ?
- Benefits of Lambda



Hands-on Practicals

- Create a function in Lambda
- Trigger the function
- Trigger the function from S3
- Create a function and trigger to start EC2 Instance
- Create a function and trigger to stop EC2 Instance
- Scheduling Auto start/stop the instances

25 CloudTrail



Learning Objective

- Logging the actions



Topics

- How CloudTrail Works?
- CloudTrail Workflow
- Setup & configure CloudTrail
- Benefits of CloudTrail



Hands-on Practicals

- Enable CloudTrail
- Working with CloudTrail
- Working with CloudTrail Log Files
- Security in CloudTrail

26 CloudWatch



Learning Objective

- Monitor the services using CloudWatch



Topics

- Debugging cloud issues
- AWS Service Health Dashboard Monitoring
- Cloud watch Monitoring
- How to get statistics for a specific EC2 instance?
- Aggregated statistics
- Metrics for other AWS Services and related namespaces
- How to Set up notifications?



Hands-on Practicals

- Dealing with metrics of all AWS services
- Creation of Alarm
- Linking the alarm with SNS topic
- Manually triggering an event to validate the alarm and SNS

27 CloudFront



Learning Objective

- Understanding CloudFront
- Enabling CloudFront to your website



Topics

- How Cloud Front Delivers the Content?
- Distributions
- Web Distributions
- How to Work with Objects?
- Request and Response Behavior
- How to Serve Private Content through Cloud Front?
- Accessing Objects using HTTPS Connection
- How to Use IAM to Control Access to Cloud Front Resources?
- Monitor Cloud Front Activity Using Cloud Watch



Hands-on Practicals

- Creation of Distribution
- Enable of Distribution
- Using S3 bucket for static contents
- Creating root object
- Enabling the HTTP/HTTPS protocols
- Usage of own domain
- Using the Cloud Front URL for accessing the webpage
- Check on statistics



Learning Objective

- Understanding CloudFormation Templates
- Creation of Stacks
- Deploy the AWS resources in quicker way
- Understanding CloudFormation Templates
- Creation of Stacks
- Deploy the AWS resources in quicker way



Topics

- How to Build AWS infrastructure as a code?
- Components in CloudFormation
- Sample templates - Utilization
- JSON – Introduction
- YAML – Introduction
- Updating Stacks



Hands-on Practicals

- Create S3 Bucket using CF template
- S3 Bucket with Bucket Name
- S3 Bucket with Retain resources
- Website Hosting in S3
- Create EC2 Instance using CF template
- EC2 Instance with EIP (Update resources by using Change Sets)
- Deploy PHP application



Real Time Projects For - Case Studies



Deploy a Windows Virtual Machine

By using Amazon Lightsail you will deploy a VM in AWS. The Cloud platform Amazon Lightsail which provides all the required resources to deploy and build websites or Applications.



Create a Serverless Web App

By using the Top AWS services like AWS Amplify, Amazon Cognito, Amazon API Gateway and AWS Lambda, Amazon DynamoDB, etc., We will implement Rest APIs in this project.



Create and mount an Amazon EFS file system

Create and mount an Amazon Elastic File System (Amazon EFS) file system to an Amazon Elastic Compute Cloud (Amazon EC2) instance using the EC2 Launch Instance Wizard.

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